

## **ABSTRACT**

Sample preparation device and method for desalting and concentrating samples prior to further analysis such as by MALDI TOF and/or electro-spray ionization (ESI) mass spectrometry. The device in accordance with an embodiment of the present invention contains a three dimensional structure preferably comprising a plurality of sorptive particles entrapped in a porous polymer matrix so as to form a device capable of carrying out solid phase extraction. The device is manufactured by introducing casting solution containing polymer and optionally particles into a housing, and subsequently exposing the device to a quench bath for a time sufficient to allow for solvent exchange and precipitation to form the composite structure in the housing. The present invention is also directed towards a method of sample preparation using the device of the present invention.